

**METHOD AND SYSTEMS FOR OPTIMIZING
HIGH-SPEED SIGNAL TRANSMISSION**

Abstract

A method and systems for automatically adjusting the parameters of signal emitter in a synchronous high-speed transmission system, is disclosed. According to the method of the invention, the quality of a high-speed received signal is analyzed for a plurality of sets of parameter values and the one producing the best signal quality is selected. In a first embodiment, the quality of the high-speed received signal is determined by analyzing a digital eye characterizing the signal behavior, obtained by over-sampling the high-speed received signal. In a second embodiment, the quality of the high-speed received signal is determined by analyzing the behavior of the phase rotator used for data sampling. Finally, in a third embodiment, the quality of the high-speed received signal is determined by analyzing a digital eye, obtained by moving the position of a phase rotator from one end to the other and sampling data at each position.